Abstract

The invention relates to a microcapsule comprising an inorganic antimicrobial agent coated with a hydrophilic polymer. The hydrophilic polymer is able to absorb sufficient water as to enable the action of the encapsulated antimicrobial agent. These microcapsules are useful to impart antimicrobial activity and can be used in polymer compositions, sprays and coatings. A method of preparing the microcapsule by treatment of the antimicrobial agent with a solution of the hydrophilic polymer is provided. Another embodiment of the invention is a method of preparing the microcapsule by coating of the antimicrobial agent with a polymer precursor followed by treatment with a reactive ingredient. Another embodiment of the invention is a method of preparing the microcapsule by melt compounding the antimicrobial agent with the hydrophilic polymer followed by grinding to the desired particle size. Polymer compositions comprising the microcapsules and a matrix polymer are also provided. Another embodiment of the invention is an article prepared from the polymer compositions comprising the microcapsules and a matrix polymer.

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